NRC INSPECTION MANUAL

PART 9900: TECHNICAL GUIDANCE

RG116_A3.TG

REGULATORY GUIDE 1.16
PARAGRAPH C.2.a(3)
REPORTING REQUIREMENTS - ABNORMAL DEGRADATION

A. PURPOSE

To provide guidance to the IE inspector regarding the types of abnormal degradation that should be reported to the Commission.

B. DISCUSSION

Section C.2.a(3) of Revision 4 to Regulatory Guide 1.16 establishes reporting requirements for abnormal degradation of boundaries designed to contain radioactive materials and includes a limited number of examples of such degradation. The following examples are provided to more clearly define those events which should be reported to the Commission in connection with this requirement:

1. Failures of flange gaskets, valve packings or weeping safety/relief valves are expected forms of degradation and should not be classified as abnormal degradation unless the leakage exceeds Technical Specification (TS) limits.

   It should be noted that leakage from these sources is normally classified as identified leakage. Accordingly, such leakage is controlled by other provisions of the TS, e.g., limiting conditions for operations relating to identified leakage.

2. Weld failures or other through-wall defects (whether isolable or nonisolable) in system components designed to contain radioactive materials should be classified as abnormal degradation. This includes any other noncontrolled leakage through seal welded connections and reactor coolant pressure boundary crack indications or defects that exceed minimum wall thickness requirements.

3. Steam generator tube leakage should not be classified as abnormal degradation unless TS limits are exceeded. It should be noted that such leakage is covered by a limiting condition for operation which requires plant shutdown when the total specific activity of the secondary system due to equivalent I-131 exceeds a value specified in the TS.

4. Steam generator tube wall thinning that exceeds minimum wall thickness requirements should be classified as abnormal degradation.

5. Steam generator tube sheet cladding separation should be classified as abnormal degradation.

6. Fuel pin cladding collapse should be classified as abnormal degradation. Deformation of fuel tubes is one form of degradation.

7. Fuel pin cladding defects such as pin holes or cracks, should not be classified as abnormal degradation. It should be noted that a limiting condition for operation requires plant shutdown whenever PWR reactor coolant system specific activity or BWR off-gas activity exceed Technical Specification limits.

8. Other forms of degradation will require consideration on a case by case basis. As general guidance, if the consequences of a particular form of degradation have been evaluated and are covered by a Technical Specification limit, the procedures with respect to violation of the Technical Specification would govern rather than the definition of "Abnormal Degradation". Such events need not be classified as abnormal degradation requiring mandatory report, if such report is not required by the applicable limiting condition for operation [paragraph C.2.b(2) of RG 1.16, rev. 4].

END